

REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated March 16, 2006 (U.S. Patent Office Paper No. 03092006), along with a Request for Continued Examination. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, claims 1 and 4-6 stand for consideration in this application, wherein claims 2-3 have being canceled without prejudice or disclaimer, while claims 1 and 3 are being amended to correct formal errors and to more particularly point out and distinctly claim the subject invention. Claims 7-22 stand withdrawn from consideration in this application. All amendments to the application are fully supported therein. Applicant hereby submits that no new matter is being introduced into the application through the submission of this response.

Prior Art Rejections

35 U.S.C. §102(b) rejection

Claims 1-3, 5, 6 were rejected under 35 U.S.C. §102(b) as being anticipated by Katayama et al (US 5151807). Claims 2-3 have been cancelled in a response to the Office Action filed on December 29, 2005, and therefore the rejection of claims 2-3 is moot. Applicants respectfully traverse the rejection of claim 1, 5, and 6 for the reasons set forth below.

According to the M.P.E.P. §2131, a claim is anticipated under 35 U.S.C. §102 (a), (b), and (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Claim 1

The Office Action contends that Katayama discloses in Fig. 13, a plurality of films including an insulation film (111), a semiconductor film (113) and a conductive film (105a or 126b) are patterned in a given pattern and stacked on a substrate (101), and a correction

portion which separates a short-circuit defect is corrected and a upper layer is present above the film to be corrected at the correction portion and the correction is applied to the film to be corrected while leaving the upper-layer film as it is. Applicants respectfully disagree.

The present invention as now recited in claim 1 provides a display device forming a display region where a plurality of films including an insulation film, a semiconductor film and a conductive film are patterned in a given pattern and stacked on a substrate, wherein at a point of time that at least one correction portion out of a correction portion which separates a short-circuit defect, a correction portion which connects an opening defect, a correction portion which removes a standard deviation defect, and a correction portion which separates a standard deviation defect of the pattern is corrected, at least one upper-layer film is present above a film to be corrected at the correction portion and the correction is applied to the film to be corrected while leaving the upper-layer film as it is, and the correction of the correction portion is performed by the irradiation of a laser beam through the at least one upper layer film from a side opposite to the substrate via no other substrate.

Figs. 5, 9, 12, 14, and 16 illustrate the present invention. These figures show that a laser beam is irradiated through an insulation film (PAS) toward defect portion below the PAS. AS shown in these figures, the laser beam is irradiated from a side opposite to the substrate via no other substrate.

Furthermore, these figure show that the defect portion is corrected, but the PAS is not damaged. In other words, the present invention provides that a defect portion of the lower-layer film in the display region of the display device comprising a plurality of layer films is corrected by the irradiation of a laser beam through the at least one upper layer film, without damaging the upper-layer film of the defect potion.

In contrast, Katayama is directed to an active matrix display apparatus in which part of the metal evaporated or melted by the laser beam irradiation for correcting a picture element defect is prevented from entering into a display medium. Thus, the objective of Katayama is completely different from that of the present invention. Furthermore, Katayama merely show that the picture element defect is corrected by irradiation with a laser beam from the outside of the display apparatus and the laser beam can be irradiated from any substrate if both substrates are made of a material through which laser beams can be transmitted. This means the laser beam in Katayama is irradiated via a substrate. Katayama says nothing about that the laser beam may be irradiated via no other substrate. Furthermore, Katayama says nothing about that the upper-layer film of a portion to be corrected not being damaged by

irradiation of a laser beam. Rather, Katayama shows that a gate insulating film 111 above a conductor layer causes a breakdown by irradiation of a laser beam.

Therefore, Katayama does not show every element recited in claim 1. Accordingly, claim 1 is not anticipated by Katayama.

Claims 5 and 6

As to dependent claims 5 and 6, the arguments set forth above with respect to independent claim 1 are equally applicable here. The base claim being allowable, claims 5 and 6 must also be allowable.

35 U.S.C. §103(a) rejection

Claim 4 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Katayama in view of Liu et al (US 5518956). This rejection is respectfully traversed for the reasons set forth below.

According to the Manual of Patent Examining Procedure (M.P.E.P. §2143),

To establish a prima facie case of obviousness, three basis criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both not found in the prior art, not in the applicant's disclosure.

The Office Action admits that Katayama does not disclose dividing the laser beams plural times. However, the Office Action further contends that Liu discloses the laser beams being pulsed, which divides the laser beams plural times, and control of the laser pulse rate determines the number of laser pulses delivered per second and thus affects the rate of ablation of the material in which the laser beam is absorbed, and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Katayama's display device to include Liu's pulsing laser beam to control the laser pulse rate to control how much power being irradiated to the material. Applicants respectfully disagree.

As set forth above, Katayama does not show every element recited in claim 1 upon which claim 4 depends.

Liu shows that where a defect in a dielectric layer 114 is disposed to electrically coupled a common electrode layer 116 and address line 113a, a laser beam is penetrated through common electrode layer 116 and dielectric layer 114 to correct the defect, and a laser beam is controlled to apply a selected energy density, which is determined by the laser pulse rate and the pulse width, to the defect portion 118 of common electrode layer 116 to ablate it without damaging underlying address line 113a. (Fig. 1, col. 3, lines 40-42, col. 4, lines 10-16) In other words, Liu shows that the laser beam is irradiated from a side of the common electrode layer, which is above the defect portion, and the lower layer is not damaged by the irradiation of the laser beam. Liu, however, does not explicitly or implicitly teach or suggest that the common electrode layer, which is the upper layer, is not damaged by the irradiation of the laser beam.

Furthermore, there is no suggestion or motivation in either Katayama or Liu to combine these features explicitly or implicitly, or in the knowledge generally available to one of ordinary skill in the art at the time the invention was made to embody all the features of the invention as recited in claim 4. Accordingly, claim 4 is not obvious in view of all the prior art.

Conclusion

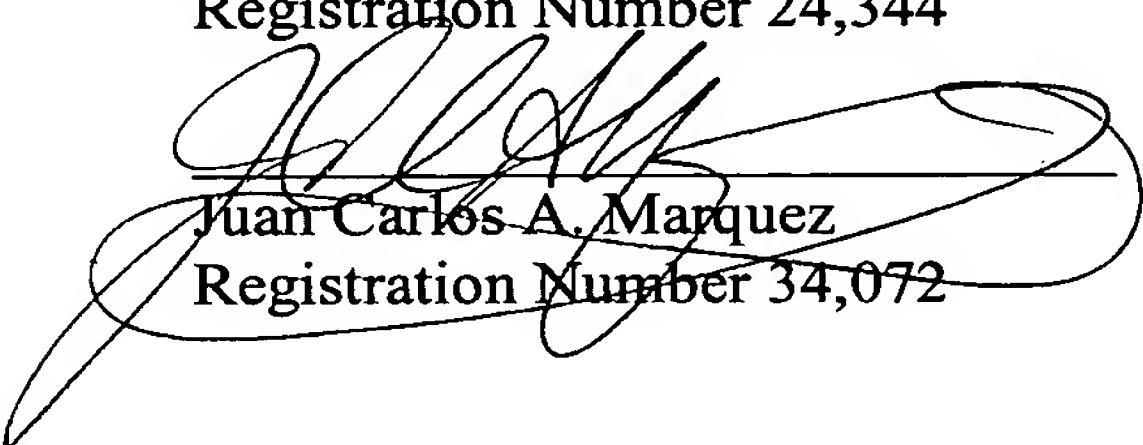
In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to

contact the Applicant's undersigned representative at the address and phone number indicated below.

Respectfully submitted,

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